Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 (Currently Amended): An automated process for monitoring water quality comprising:

providing a system for monitoring water quality, the system comprising a plurality of ion-selective electrodes and probes combined in a single flow train for multi-consistent analysis of a plurality of samples

rinsing and gas purging ~~a~~ the system for monitoring water quality;

~~performing self-test~~ self-testing and calibrating the probes;

recording calibration data;

~~rising~~ rinsing and gas purging the system;

optionally notifying an operator of the system if the operational

parameters of the probes do not meet prespecified criteria;

introducing sample to be tested into the system;

optionally adding buffer or ionic-strength adjusting solution to the probes;

monitoring water quality by measuring the analytes ~~to be determined~~ in the

sample ~~as a measure of water quality~~ with the probes;

recording the measurements;

optionally conducting a second measuring step adding appropriate solution ~~for a dilution~~ to dilute the sample in the probes or create a spike, measuring the analytes to be determined

in the sample, and recording the water-quality measurement;

optionally recalibrating the system after a number of samples are measured to detect drift of probe calibration parameters; and

producing or transmitting a computer file to record the results of the ~~sampling~~ monitoring process.

2 (Original): The process according to claim 1 wherein once the water quality conditions are monitored, further notifying an operator of the results obtained for the water quality conditions monitored.

3 (Original): The process according to claim 2 wherein the operator is notified using a voice modem or electronic mail.

4 (Original): The process according to claim 1 wherein the status of the system is monitored based upon

signals indicating the existence of at a a least one error condition.

5 (Original): The process according to claim 4 wherein the error conditions are selected form the group consisting of low sample level, insufficient power supply, malfunctioning probes, and at a a least one measurement lying outside a predetermined range.

6 (Original): The process according to claim 4 wherein, once an error condition is detected, the process is terminated and a warning signal is automatically transmitted to an operator.

7 (Currently Amended): An automated self-calibrating water quality monitoring system housing assembly comprising:

a plurality of ion-selective electrodes and probes combined in a single flow train for multi-constituent analysis of a plurality of samples;

inlet ports for introducing purified ~~fluids~~ gases into the system to gas purge the system and to clean the system between samples;

reservoirs for solutions[[,]] used in water quality monitoring;

a pump for introducing said solutions from the pulsating pressure of the order of 50 to 450 mbar to the reservoirs through ports to the sample containers;

sample containers connected to a sample pump for the sample to be sent through the flow train for analysis;

a recirculation pump for optionally recirculating samples and reagents ; and

an electronic control module for controlling the system and collecting data obtained from the electrodes and the probes.

8 (Original): The system according to claim 7 further including a heat pump for temperature control.

9 (Original): The system according to claim 7 wherein the probes are selected from the group consisting of temperature, conductance, dissolved oxygen content, turbidity, and pH.

10 (Original): The system according to claim 7 wherein the ion-selective electrodes are selective for ions

selected from the group consisting of ammonium, chloride, sodium, calcium, lead, cadmium, copper, nitrate, and nitrite.

11 (Original): The system according to claim 7 wherein the flow train is configured for repeated measurement in a recirculation loop.

12 (Original): The system according to claim 7 wherein the solutions are selected from the group consisting of deionized water, ionic strength adjustment solutions, and known volumes of standard solutions.

13 (New): The process according to claim 1 wherein the probes are configured in a single flow train.